#### Classwork 7 Topic: Lines I

Name: \_\_\_\_\_

Find the slope and use it to find the equation of the following lines. Write the equation in the form y = mx + b.

1. Line with slope 3 and passing through point (5, 2).

ANSWER

2. Line passing through points (2,0) and (0,4).

ANSWER

3. Line passing through points (1,3) and (4,0).

ANSWER

4. Line parallel to the line 2x - 6y = 3 and passing through point (0, 0).

ANSWER	

5. Line parallel to the line 3x + y + 4 = 0 and passing through the point (1, 2).

ANSWER

6. Line perpendicular to the line x + 2y = 3 and passing through point (0, 0).

ANSWER

7. Line perpendicular to the line 6x - 3y + 7 = 0 and passing through point (3, 1).

ANSWER	

Find the slope, *x*-intercept, *y*-intercept and any other point on the following lines. 8. y = 4x - 5



### Classwork 9 Intermediate Algebra MTH 35 Topic: Quadratic functions

Name: \_\_\_\_\_

For the given quadratic function, determine

- if it has an absolute maximum or minimum
- find the abs max/min
- Put the quadratic function in the standard form  $f(x) = a(x h)^2 + k$ .
- 1.  $f(x) = 2x^2 10x + 14$

ANSWER \_\_\_\_\_

2.  $f(x) = 6 - x^2 - 5x$ 

ANSWER \_\_\_\_\_

3. 
$$f(x) = -2x^2 + 2x + 1$$

ANSWER \_\_\_\_\_

4.  $f(x) = 2x^2 + 8x + 6$ 

ANSWER \_\_\_\_\_

5.  $f(x) = x^2 - 6x + 5$ 

ANSWER \_\_\_\_\_

# **Classwork 10** Intermediate Algebra MTH 35 **Topic: Solving Equations**

Name: \_\_\_\_\_

Solve the following equations.

1. 3x - 7 = 0

ANSWER

2. 5x + 9 = 6

ANSWER

3. 3x - 7 = 4x + 3

ANSWER

ANSWER

5. 4 - 3x = 8 - 6x

ANSWER	
--------	--

Γ



4. 7x - 2 = 10 - 2x

7.  $x^3 - x = 0$ 

ANSWER

ANSWER

8.  $x^2 - 5x - 14 = 0$ 

ANSWER

9.  $3x^2 - 4x - 4 = 0$ 

ANSWER

10.  $36x^3 + 18x^2 = 0$ 

12.  $4\sqrt[3]{x} - 8 = 0$ 

13.  $\sqrt{x} - x^2 = 0$ 

14.  $\sqrt{x} - \sqrt[3]{x} = 0$ 

15.  $\frac{9x^{7/2}}{2} - 16x = 0$ 

ANSWER

ANSWER

ANSWER

ANSWER

ANSWER

16. 
$$2 - \frac{30}{x} = 0$$

17.  $3x - \frac{2}{x} = 0$ 

18. 
$$2x^2 - \frac{5}{x^2} = 0$$

ANSWER

ANSWER

20. 
$$x + 1 - \frac{1}{x - 1} = 0$$

ANSWER

18. 
$$2x^2 - \frac{5}{x^2} = 0$$

19. 
$$1 - \frac{x}{x^2 - 6} = 0$$

#### Answers

1. x = 7/32. x = -3/53. x = -104. x = 12/95. x = 4/36. x = 0, 17. x = 0, 1, -18. x = -2, 79. x = -2/3, 210. x = 0, -1/211. x = 4/912. x = 813. x = 0, 1, factor out  $\sqrt{x}$ . 14. x = 0, 1, factor out  $\sqrt{x}$ . 15.  $x = 0, (32/9)^{2/5}$ , factor out x. 16. x = 1517.  $x = \sqrt{2/3}, -\sqrt{2/3}$ 18.  $x = \sqrt[4]{5/2}, -\sqrt[4]{5/2}$ 19. x = 3, -220.  $x = \sqrt{2}, -\sqrt{2}$ 

# Classwork 11 Intermediate Algebra MTH 35 Topic: Logarithm

Name: \_ Evaluate the expressions: 1.  $\log_9 81$ ANSWER **2.**  $\log_2 16$ ANSWER 3.  $\log_9 \sqrt{3}$ ANSWER 4.  $2^{\log_2 7}$ ANSWER 5.  $\log_5 \frac{1}{25}$ 

Use definition of logarithm to find *x*:

6.  $\log_3 x = 2$ 

ANSWER

7.  $\log_4 x = 2$ 

8.  $\log_x 8 = 3/2$ 

9.  $\log_2(2x-1) = 3$ 

ANSWER

10.  $\log_2 x + \log_2 3x = 4$ 



ANSWER

ANSWER